

Serial No. 10/646,938
Page 2 of 15

IN THE CLAIMS

1. **(currently amended)** A mobile terminal in a mobile communication system for authenticating a communicating party when communication is performed between the mobile terminal and a device on the side of a network, comprising:

authentication processing means which, when a request signal requesting operation execution is received from a network device, is for executing authentication processing to check whether said request signal is a request signal from an authorized network device; and

operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained, wherein said authentication processing means includes:

means for storing an identifier and key information of a mobile terminal;

a random-number generator for generating any random number when said request signal is received from the network device;

an authentication operation unit for executing a prescribed authentication operation using said key information and random number;

an authentication request signal transmitter for creating an authentication request signal, which includes said terminal identifier and random number, and sending this signal to the network device;

a receiver for receiving an authentication result, which has been obtained by an authentication operation performed on the network side, from the network device; and

a comparator for comparing the authentication result computed by the mobile terminal and the authentication result sent from the network device, wherein

84146752_1

Serial No. 10/646,938

Page 3 of 15

said operation execution means executes the operation that is in accordance with said request signal upon deciding that the network device is an authorized network device when the compared results agree.

2. (canceled)

3. (currently amended) A mobile terminal ~~according to claim 1~~ in a mobile communication system for authenticating a communicating party when communication is performed between the mobile terminal and a device on the side of a network, comprising:
authentication processing means which, when a request signal requesting operation execution is received from a network device, is for executing authentication processing to check whether said request signal is a request signal from an authorized network device; and
operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained, wherein said authentication processing means has an authentication necessity table which indicates whether each request received from the network device requires authentication, refers to this table when a request is received, and executes authentication processing if the received request is one requiring authentication, and said operation execution means executes the operation that is in accordance with said request signal if authentication that the network device is an authorized network device is obtained; and

said authentication processing means foregoes authentication processing if a request is not one requiring authentication, and said operation execution means executes the operation that is in accordance with said request signal.

84146752_1

4. (original) A network device in a mobile communication system for authenticating a network device by comparing, at a mobile terminal, authentication results computed by respective ones of the mobile terminal and network device when communication is performed between these two devices, comprising:

means for sending a signal, which requests that a mobile terminal execute a prescribed operation, to said mobile terminal;

a table for storing correspondence between an identifier and key information of a mobile terminal;

a receiver for receiving, from the mobile terminal that has received said request signal, an authentication request signal that includes the identifier and random number of said mobile terminal;

a key-information acquisition unit for acquiring key information, which corresponds to the received identifier of the mobile terminal, from said table;

an authentication operation unit for executing an authentication operation using said acquired key information and said received random number; and

a transmitting unit for transmitting the authentication result to the mobile terminal.

5. (currently amended) A mobile communication system for authenticating a communicating party when communication is performed between a mobile terminal and a device on the side of a network, wherein

the mobile terminal includes:

Serial No. 10/646,938

Page 5 of 15

authentication processing means which, when a signal requesting execution of a prescribed operation has been received from a network device, is for sending an authentication request signal to the network device in order to determine whether said request signal is a request signal from an authorized network device; performing an authentication operation; and comparing result of this authentication operation with result of an authentication operation sent from the network device; and

operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained; and

said network device includes an authentication operation unit for executing an authentication operation based upon an authentication request signal received from said mobile terminal, and sending result of this authentication operation to the mobile terminal, wherein the authentication processing means of said mobile terminal includes:

means for storing an identifier and key information of a mobile terminal;

a random-number generator for generating any random number when said request signal is received from the network device;

an authentication operation unit for executing a prescribed authentication operation using said key information and random number;

an authentication request signal transmitter for creating an authentication request signal, which includes said terminal identifier and random number, and sending this signal to the network device;

a receiver for receiving result of an authentication operation obtained by an authentication operation of the network device; and

84146752_1

Serial No. 10/646,938

Page 6 of 15

a comparator for comparing result of the authentication operation performed by the mobile terminal and the result of the authentication operation sent from the network device; and the authentication processing means decides that the network device is an authorized network device when the compared results agree.

6. (canceled)

7. (currently amended) A mobile communication system according to claim 5 for authenticating a communicating party when communication is performed between a mobile terminal and a device on the side of a network, wherein

the mobile terminal includes:

authentication processing means which, when a signal requesting execution of a prescribed operation has been received from a network device, is for sending an authentication request signal to the network device in order to determine whether said request signal is a request signal from an authorized network device; performing an authentication operation; and comparing result of this authentication operation with result of an authentication operation sent from the network device; and

operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained; and

said network device includes an authentication operation unit for executing an authentication operation based upon an authentication request signal received from said mobile terminal, and sending result of this authentication operation to the mobile terminal, wherein said

84146752_1

Serial No. 10/646,938

Page 7 of 15

authentication processing means executes authentication processing if a request is one requiring authentication, and said operation execution means executes the operation that is in accordance with said request signal if authentication that the network device is an authorized network device is obtained; and

said authentication processing means foregoes authentication processing if a request is not one requiring authentication, and said operation execution means executes the operation that is in accordance with said request signal.

8. (currently amended) A mobile communication system according to claim [[6]] 5, wherein said network device further includes:

means for sending a mobile terminal a request signal requesting execution of an operation;

a table for storing correspondence between an identifier and key information of a mobile terminal;

a receiver for receiving, from a mobile terminal that has received said request signal requesting execution of the operation, an authentication request signal that includes an identifier and random number of said mobile terminal; and

a key-information acquisition unit for acquiring key information, which corresponds to the received identifier of the mobile terminal, from said table; and

said authentication operation unit executes an authentication operation using the key information acquired by said key-information acquisition unit and said received random number, and sending result of the authentication operation to the mobile terminal.

84146752_1

Serial No. 10/646,938

Page 8 of 15

9. (currently amended) A mobile communication system according to claim 5 for authenticating a communicating party when communication is performed between a mobile terminal and a device on the side of a network, wherein
the mobile terminal includes:

authentication processing means which, when a signal requesting execution of a prescribed operation has been received from a network device, is for sending an authentication request signal to the network device in order to determine whether said request signal is a request signal from an authorized network device; performing an authentication operation; and comparing result of this authentication operation with result of an authentication operation sent from the network device; and

operation execution means for executing an operation that is in accordance with said request signal only if authentication that the network device is an authorized network device is obtained; and

said network device includes an authentication operation unit for executing an authentication operation based upon an authentication request signal received from said mobile terminal, and sending result of this authentication operation to the mobile terminal, wherein said request signal requesting operation execution is a signal requesting that emission of radio waves be inhibited.

10. (original) A mobile communication system according to claim 5, wherein said request signal requesting operation execution is a signal requesting that inhibition of emission of radio waves be cancelled.

84146752_1

Serial No. 10/646,938

Page 9 of 15

11. (original) A mobile communication system according to claim 5, wherein said request signal requesting operation execution is a signal requesting that the mobile station make a transition to power cut-off or to a standby operation.

12. (original) A mobile communication system according to claim 5, wherein said request signal requesting operation execution is a signal requesting disclosure of mobile terminal information possessed by the mobile terminal.

13. (original) A mobile communication system according to claim 12, wherein said mobile terminal information is user settings information that a user of the mobile terminal has stored beforehand in a storage unit of the mobile terminal.

14. (original) A mobile communication system according to claim 12, wherein said mobile terminal information is status information of the mobile terminal.

15. (original) A mobile communication system according to claim 14, wherein said status information is voltage information indicating residual capacity of a battery of the terminal, or traveling-velocity information measured by a mobile unit, or present-position information detected by a mobile unit.

84140752_1